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ABSTRACT

This manual is intended for use in training a local career education program design group in the techniques involved in producing a program design document by giving group members step-by-step, hands-on experience. These materials, representing a one-and-one-half-day workshop consist of ten activities. Topics covered in the activities are an overview of the workshop, career education program planning, making initial decisions, introducing the program design, goal development, writing learning objectives, determining evaluation criteria for objectives, planning learning experiences, and reviewing previous work. Each activity contains a statement of purpose, its estimated time, an explanation of its format, and specific implementation suggestions. A total of twelve workshop activity handouts are provided. These include a workshop agenda, definitions of program and program design, a program information form, lists of program contexts and activities, sources of career education activities, a goal area program element worksheet, a discussion of the meaning and relationship of goals and objectives, examples of process goals, and an outcome-oriented view of program structure. (Five other career education workshops covering career education concepts and practices, linking agents, program improvement, opinion surveys, and school improvement processes are available separately through ERIC--see note). (MN)

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ED199453

CAREER EDUCATION
PROGRAM DESIGN

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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For two years, the Career Preparation Component of Reserach for Better Schools, Inc. (RBS) has been working collaboratively with schools, intermediate service agencies and state education departments to plan, implement, and support career education activities in schools in Delaware, New Jersey, and Pennsylvania. The activities suggested in this workshop are based on RBS experience in working with the staff members of these agencies. The author wishes, therefore, to acknowledge the many contributions of these professionals to this work.

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OVERVIEW

The purpose of this workshop is to train a local "program design group" in the techniques involved in producing a program design document by giving group members step-by-step, hands-on experience in the process of program design. The audience, the "program design group," is a group of professionals whose task is to plan the career education program. Non-professional citizen participation in the activities of the program design group should be limited to liasion activities with a larger citizen advisory group.

It is anticipated that the activities, undertaken as described, should occupy approximately one and one-half days of workshop time.

OBJECTIVES

At the completion of this workshop, it is anticipated that participants will have:

- discussed the definitions of program and program design
- written a statement of purpose for their local career education program
- decided upon the target population for their local career education program
- decided in which contexts career education should be delivered to the target population in their local career education program
- decided on some of the kinds of activities the local program should include
- written an introduction to their career education program design document
- decided on at least one goal of their local career education program
- written at least one learning objective which represents progress toward their selected goal
- written at least one evaluation criterion for one of their program's learning objectives

- planned one learning activity for one learning objective
- reviewed their program design work in terms of their original purposes
- discussed the nature and function of "process goals" in the program design document.

DIRECTIONS TO THE TRAINER

1. The following pages describe activities which can be used to present the topics included in this workshop. You may present these activities as described, or you may alter, delete, add, or change the order of activities according to the needs of the participants.

2. Handouts which accompany this workshop are listed in the table of contents and are printed on white paper to facilitate copying. Plan to have one copy of each handout for each participant available at the start of the workshop.

3. The time needed for the workshop is approximately nine hours. Estimates of time needed to complete an activity are included in each activity description. If this workshop is presented in one and one-half days, the activities might be divided as follows:

   First morning - Overview of the Workshop
   Introduction to Career Education Program Planning
   Making the Initial Decisions

   First afternoon - Introducing Your Program Design
   Building a Program Design:
   Goal Development
   Writing Learning Objectives

   Second morning - Building a Program Design:
   Determining Evaluation Criteria for Objectives
   Planning Learning Experiences
   Review of Previous Work
   Summary

4. Since the anticipated audience of this workshop is one local program design group, all activities are written for a small group.

5. Both italics and roman type are used in activities in this workshop outline. The words in italics are addressed to you, the trainer, and the words in roman type give information you may want to pass on to your audience.

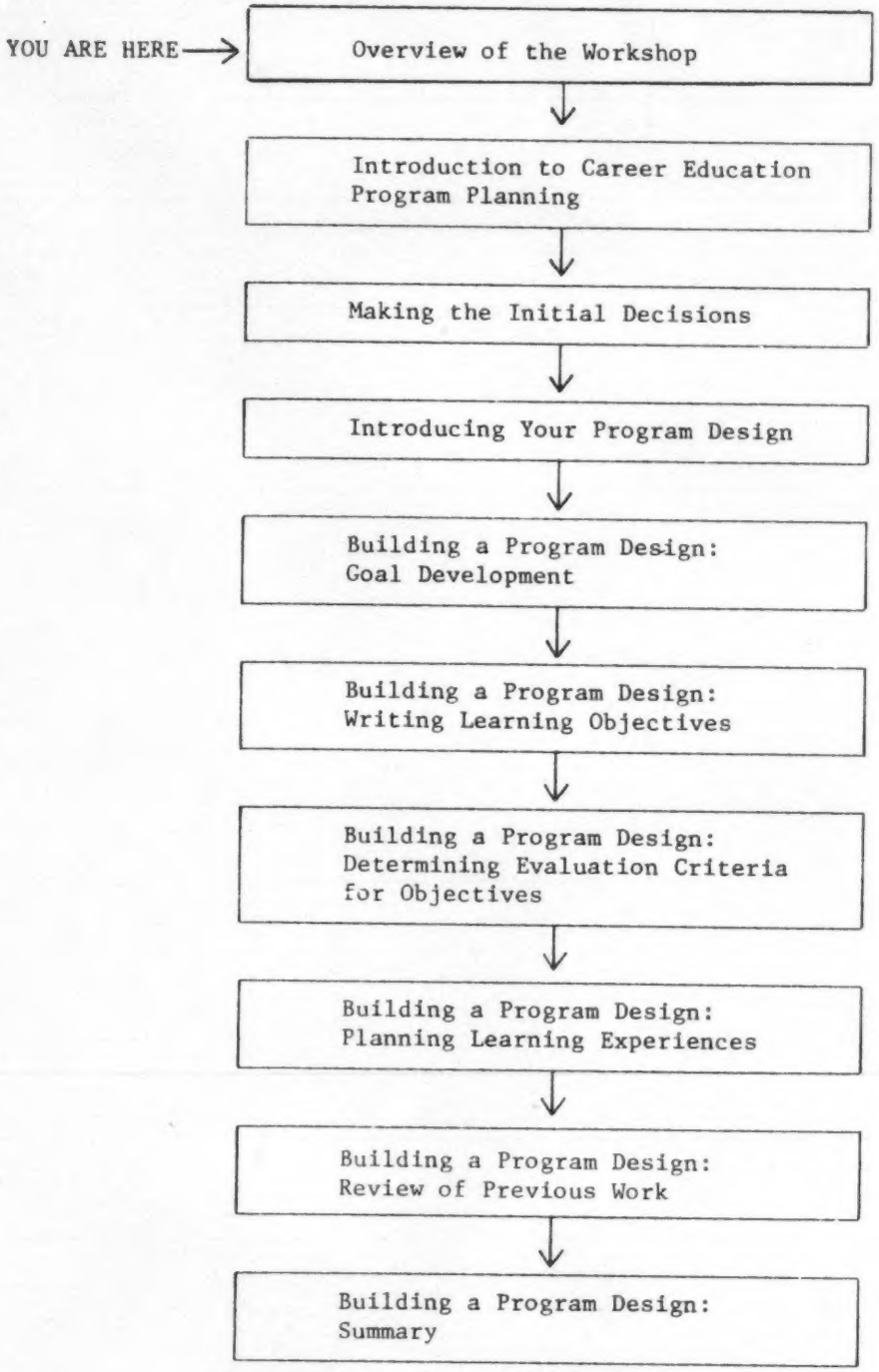
6. A diagram entitled "Sequence of Activities" is inserted at the beginning of each new acitivity. The purpose of this diagram is to signal the start of the activity marked with the notation, "YOU ARE HERE."

7. This workshop description is not intended to be the sole basis for your qualification to lead the workshop. Trainer orientation and technical assistance from Research for Better Schools, Inc. are recommended.

8. Before attempting presentation of any activity, you should become familiar with this entire document.

9. This workshop is designed to be used with two others. The suggested sequence of workshop presentations is "Getting Ready for School Improvement in Career Education" (Smey, 1981a), "School Improvement Processes in Career Education" (Smey, 1981b), and finally this workshop.

SEQUENCE OF ACTIVITIES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ACTIVITY

Overview of the Workshop

The purpose of this activity is to provide a brief overview of the current workshop.

Estimated time of activity: 5 minutes.

1. *Distribute the handout, "Agenda--Career Education Program Design."*

2. *Explain to participants that this handout outlines the topics to be covered in the current workshop and the order in which these topics will be presented.*

ACTIVITY HANDOUT

Agenda--Career Education Program Design

I. Overview of the Workshop

II. Introduction to Career Education Program Planning

III. Making the Initial Decisions

IV. Introducing Your Program Design

V. Building a Program Design: Goal Development

VI. Building a Program Design: Writing Learning Objectives

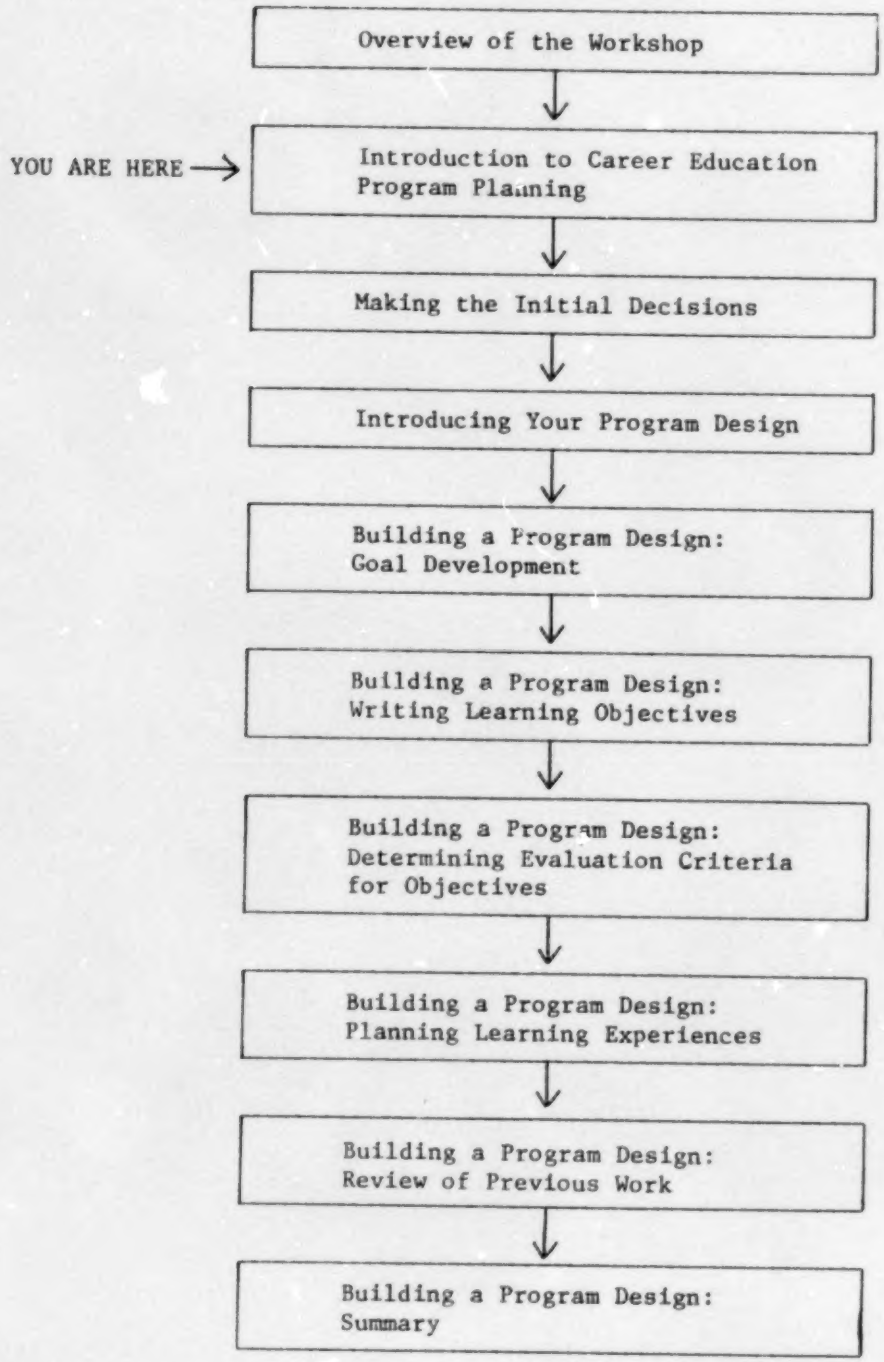
VII. Building a Program Design: Determining Evaluation Criteria for Objectives

VIII Building a Program Design: Planning Learning Experiences

IX. Building a Program Design: Review of Previous Work

X. Building a Program Design: Summary

SEQUENCE OF ACTIVITIES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ACTIVITY

Introduction to Career Education Program Planning

The purpose of this activity is to establish common understandings of definitions and concepts that will be used during the program design process. This is a group discussion activity. During this first major activity of the workshop, it is likely that the overall relationship between team members and the trainer who conducts the workshop will be established. You should attempt to make this relationship a friendly, collegial, collaborative, and informal one. Thus, you should try to introduce as much discussion as possible into your presentation.

Estimated time of activity: 45 minutes.

1. *You might begin the session by explaining that:*

   - Designing a career education program implies creating a document called a career education program design.
   - Creation of the document further implies that the designers understand the definitions of the terms "program," "career education program," and "program design."
   - This activity has as its aim the group's understanding of these terms.

2. *Having informed the group of the aim of the activity, explain that the first task is to examine the meaning of the term "program." Distribute the activity handout, "The Definition of Program: Inherent Concepts and Their Implications," and ask participants to read it.*

3. *When participants have finished reading, discuss the definition of program with the group in terms of the concepts developed in the handout.*

4. *After clarifying the term "program," ask:* What is a career education program? *Engage in group discussion, concluding that a career education program is one that addresses career education outcomes.*

5. *Explain to the group that they are about to begin the writing of a career education program design document. Distribute the activity handout, "Definition of Program Design," and use it as a basis for a discussion of the definition of a "program design." Then make the points:*

- A program design is a document.
- A program design specifies "what will be."
- A program design is actualized by a planned implementation process.
- An actualized (or implemented) program design is a program.
- Designing a program and implementing a program are two different things.
- The next step after program design is the development of an implementation plan.
- Purpose, target population, components, contexts, student goals and objectives are some, but not all, of the ingredients of a program design.
- The program design must state what the school will do to provide effective learning experiences for pupils. These are called "process goals."
- The program design should give some examples of the kinds of learning activities that will comprise the program.
- The program design must establish the criteria which will be used to evaluate student attainment of objectives.

ACTIVITY HANDOUT

The Definition of Program: Inherent Concepts and Their Implications

A program is

- an organized sequence of interrelated learning opportunities
- designed to achieve broad educational goals and their related specific objectives
- for a specified population of learners
- provided by a group of coordinated educational components directed by the local school.

Learning Opportunities

A program is a set of learning opportunities. This differentiates the program from both the program plan and the goals which the program seeks to achieve. As a set of learning opportunities, the program is observable -- it can be seen in action.

Designed to Achieve Goals and Related Objectives

In a program, learning opportunities are provided to learners purposefully. Experiences are designed to build upon one another toward the attainment of specific educational objectives. Sets of objectives, in turn, are structured in such a way that their collective attainment in a learner represents significant progress toward a general educational goal.

Goals serve to define the educational purpose of a program. As a definition of purpose, the set of goal statements must be generally understood by all school staff members who are involved in the delivery of educational services. Program objectives serve as operational clarifications of program goals. As such, objectives must be observably attainable and each objective must be specifically understood by those staff members whose responsibility it is to promote student attainment thereof.

Coordinated Educational Components

Learning opportunities are provided to the learner by various functional components of the school (e.g., classroom teaching staff, counselors, resource center staff). The efforts of specific components are directed toward student attainment of specific objectives; the concerted effort of all components moves the learner toward the program goals.

Organized

Not every set of learning opportunities constitutes a program. A program is characterized, among other things, by organization. This organization is effected according to (a) purpose, (b) provider, and (c) context. First, learning opportunities within a program are organized according to the goals or purposes they serve. Second, a program's learning opportunities are structured within the component whose responsibility it is to provide the learning opportunity. Finally, occasions for learning are organized according to the contexts in which they are delivered. These contexts might include, but need not be limited to, classroom, home, and community-at-large. The organization which characterizes a program is planned and is based on the school's philosophy of education and teaching-learning theory.

Sequence

Within the program's organization, learning experiences occur in predesigned sequence. A particular sequence may be suggested on the basis of the structure of various disciplines, teaching-learning theory, and the principles of developmental psychology. The continuum of learning experiences may, for example, progress from easy to difficult, from simple to complex, or from basic understandings to elaborate concepts built on those understandings. On the other hand, sequencing may only serve the purpose of preventing duplication of instructional effort and guaranteeing similar learning opportunities to all learners served by the program.

Specified Population of Learners

A program is targeted at a specific group of learners. This targeting allows learning opportunities to be tailored to the learner in such a way as to capitalize on the strengths and to compensate for deficiencies of the learner group. Further, targeting allows activities to be designed in accord with pertinent research on the characteristics of the target group. Even if the total student population is to be served by the program, the learner population should be specified to allow for efficient program planning and for explicit direction to those delivering instructional services.

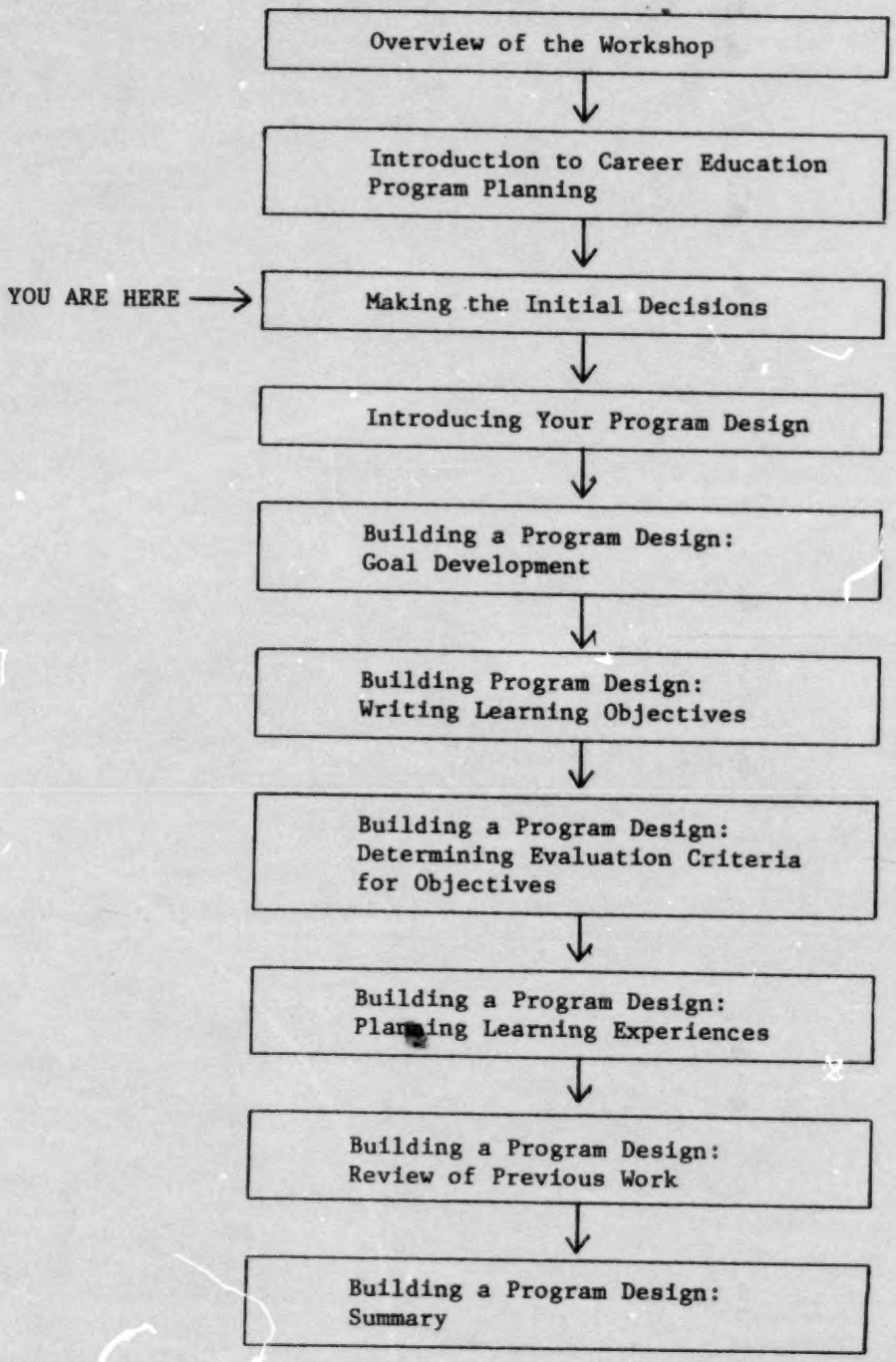
ACTIVITY HANDOUT

Definition of Program Design

A "program design" is a document detailing

- the purpose of a program
- its target population
- its components
- the contexts in which it occurs
- its student goals and objectives
- its institutional, or process, goals
- examples of student learning activities
- the evaluation criteria applied to specific learning objectives.

SEQUENCE OF ACTIVITIES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ACTIVITY

Making the Initial Decisions

In this activity, the program design group makes some basic decisions preliminary to beginning the actual program design document. These decisions involve the program's:

- *purpose*
- *target population*
- *contexts*
- *types of program activities.*

Decisions from this activity will be combined with previously-made decisions and will be entered on a Program Information Form. This form will provide the basis for writing an introduction to the program design document in the next activity.

Estimated time of activity: 60 minutes.

1. *Begin the activity by distributing the handout, "Program Information Form." Ask participants to fill in the name of the school or district on the first line.*

2. *Explain that previous planning has already resulted in:*

   - *a definition of career education*
   - *the goal areas (or outcome areas) to be addressed by the new career education effort*
   - *the elements of the new career education program*
   - *an element-outcome grid (cf. Smey, 1981b, pp. 67-71), assigning outcomes to program elements.*

   Ask the design group to write their definition, goal areas, and program elements in the appropriate spaces on the Program Information Form.

3. *When the participants have finished writing, explain that they must now decide on the target population for the program they are developing. The target population of a program can be <u>all</u> students in a*

school or district. On the other hand, the target population might be limited to a particular grade or type of student. This decision is made now, and should be carefully discussed. In participating in this discussion, you should keep the group's attention focused on the consequences of their decision, the stated purpose of the program, and on the definition of career education being used. After the decision on target population is made by the group, participants should enter the decision in the appropriate space on the Program Information Form.

4. *When the participants have finished writing, advise them that the next task is to decide on the contexts in which the career education program will operate and the kinds of activities envisioned for the program. Activities which should be considered include those which are solely directed at career education goals and those which are "infused" into academic subject matter (For a review of the concept of infusion, see Finn, 1978; Preli, 1978; and/or Suhor, n.d.).*

   Remind the group that learning can and should be ubiquitous and occur as the result of many planned and unplanned actions on the part of students. What we are concerned with here, however, is where and how planned learning will occur.

   Distribute the two handouts, "Program Contexts and Activities," and "Some Sources of Career Education Activities." Use "Program Contexts and Activities" as a discussion outline, referring to "Some Sources of Career Education Activities" as a list of examples of sources. You may wish to have some sources on hand for group perusal before, during, or after the discussion. Make certain that, as a result of the discussion, the group actually decides which contexts will be used in the new program and, in general, the kinds of activities envisioned for the learners.

   Once decisions on contexts and activities have been made, ask the participants to write down their decisions in narrative form in the spaces so labelled on the Program Information Form.

5. *The final task in this activity is to write a statement of purpose for the program. To accomplish this, the trainer may wish to open a discussion as follows:*

   You now have

   - your definition of career education
   - the goal areas which your school community wishes to address in the program

- the elements of the program to be designed
- the population of students at which your program will be directed
- the contexts in which your program will occur
- the kinds of program activities in which the students will engage.

Knowing all this, answer the question: "What is the purpose of this career education program?"

Develop the answer in discussion, and as the discussion reaches closure, ask the group to formulate a group answer and write it in narrative style in the space provided on their Program Information Form.

6. *Explain to the group that the Program Information Form which they have now completed will be the source of information for the introduction to the program design document which will be written in the next activity.*

ACTIVITY HANDOUT

Program Information Form

_____ CAREER EDUCATION PROGRAM

DEFINITION OF CAREER EDUCATION:

GOAL AREAS TO BE ADDRESSED BY PROGRAM:

1. _____
2. _____
3. _____
4. _____
5. _____

ELEMENTS OF THE CAREER EDUCATION PROGRAM:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

TARGET POPULATION: _____

CONTEXTS IN WHICH CAREER EDUCATION WILL TAKE PLACE:

LEARNING ACTIVITIES TO BE INCLUDED IN PROGRAM:

PURPOSE OF PROGRAM:

ACTIVITY HANDOUT

Program Contexts and Activities

IN WHAT CONTEXTS WILL CAREER EDUCATION BE DELIVERED IN THE PROGRAM?
(i.e., where and through what kinds of activities is learning expected to occur? Examples below.)

WHERE?

- HOME
  - in homework
  - in home projects
  - in using family members as human resources
- COMMUNITY-AT-LARGE
  - in community facilities (libraries, museums, galleries, etc.)
  - using community human resources wherever they might be located
  - in the workplace
- SCHOOL
  - in classroom/laboratories
  - in library/media center
  - in guidance offices
  - in assembly centers
  - in school-at-large

WHAT KINDS OF ACTIVITIES WILL BE PART OF THE PROGRAM?

- Classwork (small and large group)
- Guidance (individual and group)
- Testing
- Reference assignments
- Interpersonal assignments (interviews)
- Reflective assignments (self-assessment)
- Work experience
- Team work
- Trips...observation

WILL ACTIVITIES BE SPECIFICALLY CAREER EDUCATION OR WILL THEY BE INFUSED INTO ACADEMIC SUBJECTS?

ACTIVITY HANDOUT

Some Sources of Career Education Activities

Andrews, E., Hansen, M. L. & Ritvo, P. Exploring arts and humanities careers in the community. Washington, D.C.: U.S. Government Printing Office, 1976.

California State Department of Education, Implementing career education: Instructional strategies guide for kindergarten through grade twelve. Sacramento, Calif.: Author, 1977.

Finn, P., & Lawson, J. Career education activities for subject area teachers (3 vols.). Cambridge, Mass.: Abt Associates, 1975.

McClure, L., Cook, S. C. & Thompson, V. Experience-based learning: How to make the community your classroom. Portland, Ore.: Northwest Regional Educational Laboratory, 1977.

Mitchell, J. S. The classroom teacher's workbook for career education. New York: Avon Books, 1979.

Office of Career Education, U.S. Office of Education. Career education: How to do it: Creative approaches for local practitioners. Washington, D.C.: Author, 1974.

Pacific Consultants. Dimensions: A catalog of ideas relating education to work. Washington, D.C.: Author, n.d.

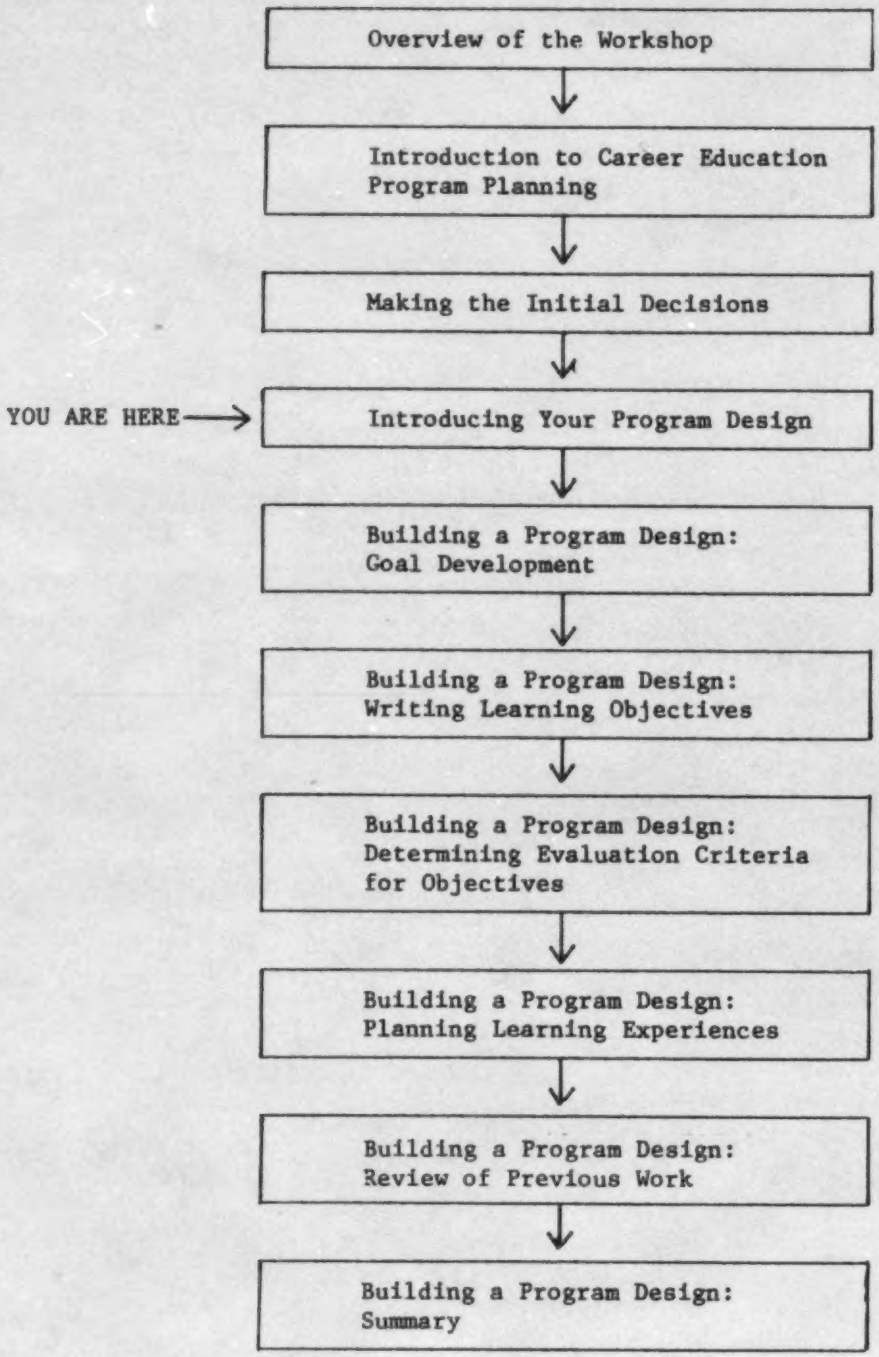
Pepperman, C., Cassel, R., Bowman, J., Gingrich, D., Jones, L. & Moore, C. K. Getting started: A guide to writing your own curriculum (4 vols.). Lewisburg, Pa.: Central Susquehanna Intermediate Unit, 1976.

Ritvo, P., & Hansen, M. L. Career guidance in the arts and humanities: Activities, information and resources for grades 7-12. Washington, D.C.: U.S. Government Printing Office, 1976.

Roseville (Minnesota) Area Schools. Going places with career education--Language arts units. White Bear Lake, Minn.: Minnesota Instructional Materials Center, n.d.

Taylor, B. L., Williams, C., Haley, F., Schwartz, R., Hedstrom, J. E. & Turner, M. J. Tips for infusing career education in the curriculum. Boulder, Colo.: Social Science Education Consortium, Inc., 1977 (ERIC Document Reproduction Service No. SO 010 154).

SEQUENCE OF ACTIVITIES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ACTIVITY

Introducing Your Program Design

The purpose of this activity is to produce the written introduction to the program design document. The activity builds upon information consolidated on the Program Information Form completed during the last activity. It is recommended that the group compose the program design introduction and that one of the group members be assigned as "scribe/editor" (duties described in 2, below).

Estimated time of activity: 45 minutes.

1. *You might begin with the group as follows:*

   - The last activity involved bringing together information and making some preliminary design decisions. As a result, we produced a "Program Information Form." From this, we will now write an introduction to our program design document.

2. *Appoint a scribe/editor, explaining that the job will entail (a) writing down the "rough draft" of the introduction as you proceed through this activity, and (b) editing the document for form and style. Make sure the appointee is supplied with paper and pencil.*

3. *Continue with the explanation of the task, once a scribe/editor has been appointed:*

   The introduction to the program design document will be a short narrative that should be simple, straightforward, and jargon-free.

   - The first paragraph defines career education. This definition is taken directly from your Program Information Form. Appropriate introductory and concluding sentences may be added to the definition paragraph if you feel that this is necessary or advisable.

     Determine whether the group wishes to add to the definition. Once any additions are made, allow the scribe/editor to copy the definition and whatever additions the group makes. Continue:

   - The second paragraph of the introduction explains the purpose of the career education program. This purpose is found on the Program Information Form. If the group so desires, additional introductory, conclusive, and/or explanatory sentences may be added to the statement of purpose.

Determine whether the group wants to add to the statement of purpose. Discuss possible additions. Allow the scribe/editor to copy the expanded statement of purpose as the second paragraph of the introduction. Continue:

- The third paragraph of the introduction contains a statement of the target population and the contexts in which the career education program will operate. Both items are again given on the Program Information Form. Again, these pieces of information should be presented in a coherent paragraph, which the group should compose now.

  As the paragraph develops, the scribe/editor should copy it as paragraph #3 of the introduction. Continue:

- The fourth paragraph of the introduction outlines the elements or functional components of the career education program. Again, these are found on your Program Information Form. The group may wish to define or explain these elements briefly. More than one paragraph may be needed here.

  As the section develops, the scribe/editor should copy it into the "rough draft" of the introduction. Continue:

- The next paragraph of the introduction lists the goal areas to be addressed by the program along with the kinds of learning activities that are envisioned as part of the program. Again, all this information is taken from the Program Information Form. Here, too, more than one paragraph may be needed for appropriate explanation.

  As this section develops, the scribe/editior should copy it into the "rough draft" of the introduction. Continue:

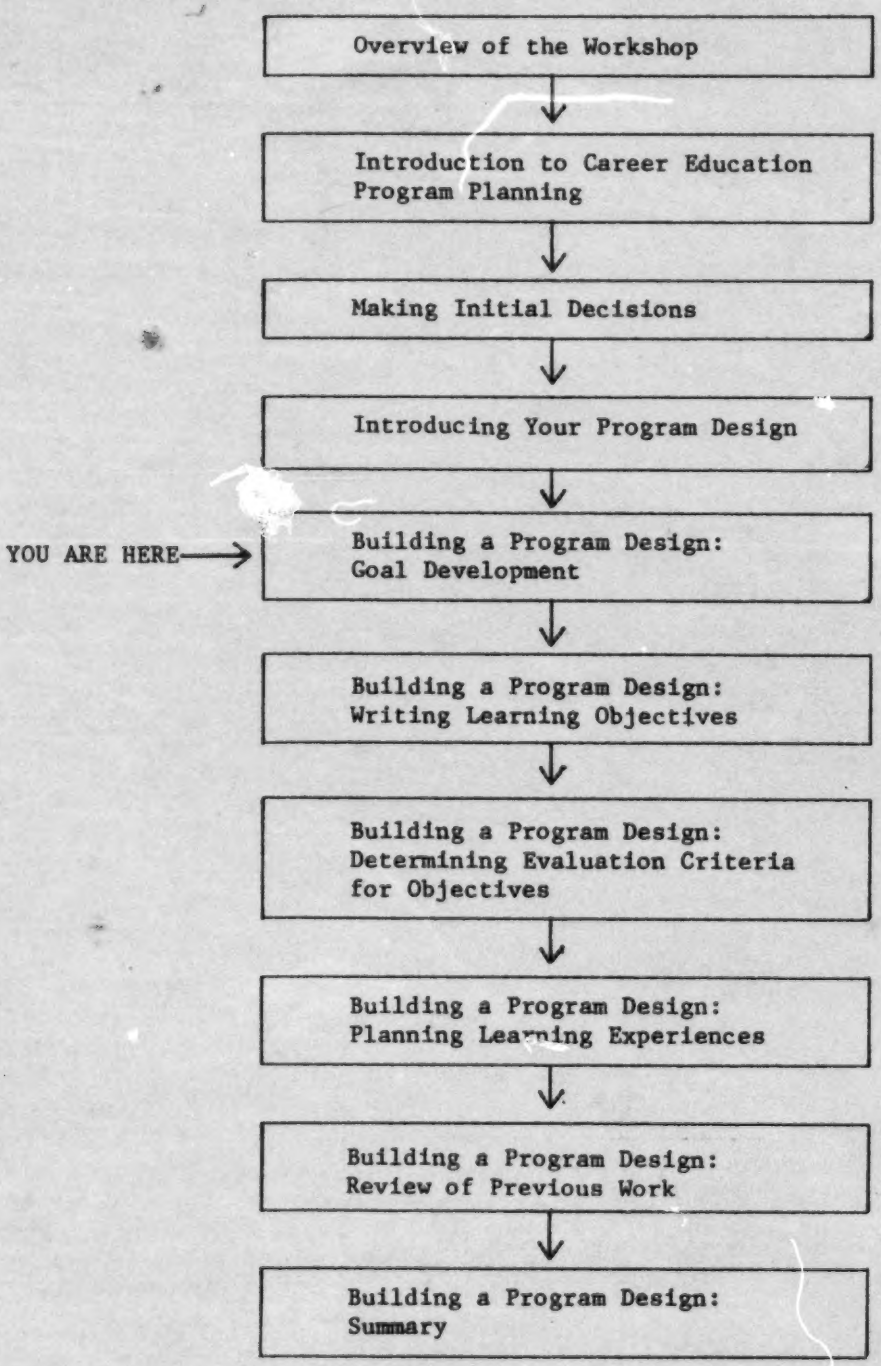
- The conclusion of the introduction is a rationale for the program. At this time, it would be a good idea to have our scribe/editor read back to us what we have already written. Then let's ask ourselves the question: "Why do we plan to do things in the way we have described?"

  Let the "rough draft" be read back, and the above question. At the close of the discussion, have the group compose the concluding rationale, which the scribe/editor should copy.

4. *The final task here is to ask the scribe/editor to review the draft, edit it for form, style and mechanics, and polish the draft into a finished document. Editing and polishing should be arranged as a "homework" assignment or as some other assignment which will not interfere with the scribe/editor's continued participation in the workshop. Also, some mechanism for group approval of the finished document might be planned here. Explain that after group approval, the introduction should be presented to the appropriate authorities for their approval, since it would be senseless to plan something which ultimately would be disapproved. The group should obtain approval <u>now</u>, making any changes that are necessary.*

   The next task will involve the writing of the main body of the program design.

SEQUENCE OF ACTIVITIES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ACTIVITY

Building a Program Design: Goal Development

This activity will assist the design group to (a) distinguish between educational goals and learning objectives, and (b) produce, for their career education program, one to three goal statements for a single program element within a single goal area.

For one of the goals written during this activity, learning objectives will be specified later in the workshop.

It is assumed that a career education element-outcome grid (see Smey, 1981b, pp. 67-71) has been developed before this workshop. It is from this grid that the workshop builds.

You might find it helpful to review the subject of educational goals before proceeding with this activity. Resources which might prove helpful are Brackenbury (1967); Brookover (1980), Chapter 2; Kaplan, et al. (1974); and Saylor and Alexander (1974), Chapter 4.

Before beginning this activity, be sure that each participant has a copy of the element-outcome grid for career education that has already been adopted, and a copy of any needs assessment or survey reports which bear on career education needs.

Estimated time of activity: 30 minutes:

1. *You might begin the discussion as follows:*

   - Previous planning efforts have produced a career education element-outcome grid. It has already been decided which program elements will deliver career education in particular goal areas. First, let us select a goal area on which we might want to begin work; then within that goal area, let us select one particular program element.

     Now, the team should select one element-outcome category from their grid. At this point, distribute to each participant a copy of the handout, "Goal Area - Program Element Worksheet."

   - Each member of the group should now enter the goal area and program element that we have selected in the spaces (I & II) provided on the handout.

2. *Now explain to the group that the next task will be to write some career education goals (no more than three) for the selected program element within the selected goal area.*

3. *At this point, distribute the activity handout, "Goals and Objectives--What They Are and How They Relate." Tell the group that goals and objectives are often confused. To eliminate any confusion and to allow everyone to adopt a common frame of reference, the distinctions in the handout are proposed. Allow the group sufficient time to read the handout, and then discuss the handout until you are satisfied that the participants understand the distinction between goals and objectives.*

4. *Suggest that the group consider the goal area and program element of interest in light of any needs assessment or survey information that might be available. The group should formulate at least one (but for now, no more than three) goals for the career education program element in this goal area. Do this now.*

5. *When the group completes its goal development, instruct the members to write the goal statements in the appropriate place (V) on the "Goal Area - Program Element Worksheet."*

6. *Explain that the next task will be to write objectives for <u>one</u> of their goals.*

ACTIVITY HANDOUT

Goal Area - Program Element Worksheet

I. GOAL AREA: _____

II. PROGRAM ELEMENT: _____

III. PROGRAM ELEMENT PROCESS GOALS:

1. _____

_____

2. _____

_____

3. _____

_____

IV. CONTEXTS (With Clarifications):

1. _____

2. _____

3. _____

4. _____

5. _____

V. GOALS:

1. _____

_____

2. _____

_____

3. _____

_____

VI. GOAL #_____, OBJECTIVES (with grade):

1. _____

_____Grade _____

2. _____

_____Grade _____

3. _____

_____Grade _____

VII. GOAL #_____, OBJECTIVE #_____, GRADE _____:

VIII. LOCATION: _____

IX. SAMPLE LEARNING ACTIVITY:

X. EVALUATION CRITERION (a):

ACTIVITY HANDOUT

Goals and Objectives: What They Are and How They Relate*

Learning activities are expected to result in particular *learning outcomes*, such as the student knowing a fact or knowing how to do something. Learning outcomes may or may not be specifically intended. If they are intended, they are called *learning objectives*. If they are not specifically intended, they are called side effects or unintended learning outcomes.

Students learn many things (intended and unintended) in and out of school. As students mature, the learnings become internalized and integrated. Changes in students which result from a combination of maturation and integration of learned facts and ideas are called *educational results*. Again, educational results may be intended or unintended. Intended educational results are called *educational goals*.

Educational goals are changes in students toward which learning outcomes lead. Goals describe attributes of the educated person, they represent, in part, the cumulative effect of meeting many learning objectives.

Educational goals justify learning objectives. If one asks why a learning objective is important, the answer can be given in terms of the established educational goal. On the other hand, learning objectives actualize educational goals. If one asks how an educational goal is to be approached, the answer can be given in terms of the learning objectives.

Examples of goal statements:

- The student applies basic principles and concepts of the sciences, arts, and humanities to interpret personal experiences
- The student behaves rationally based on reasonable perceptions of self and society

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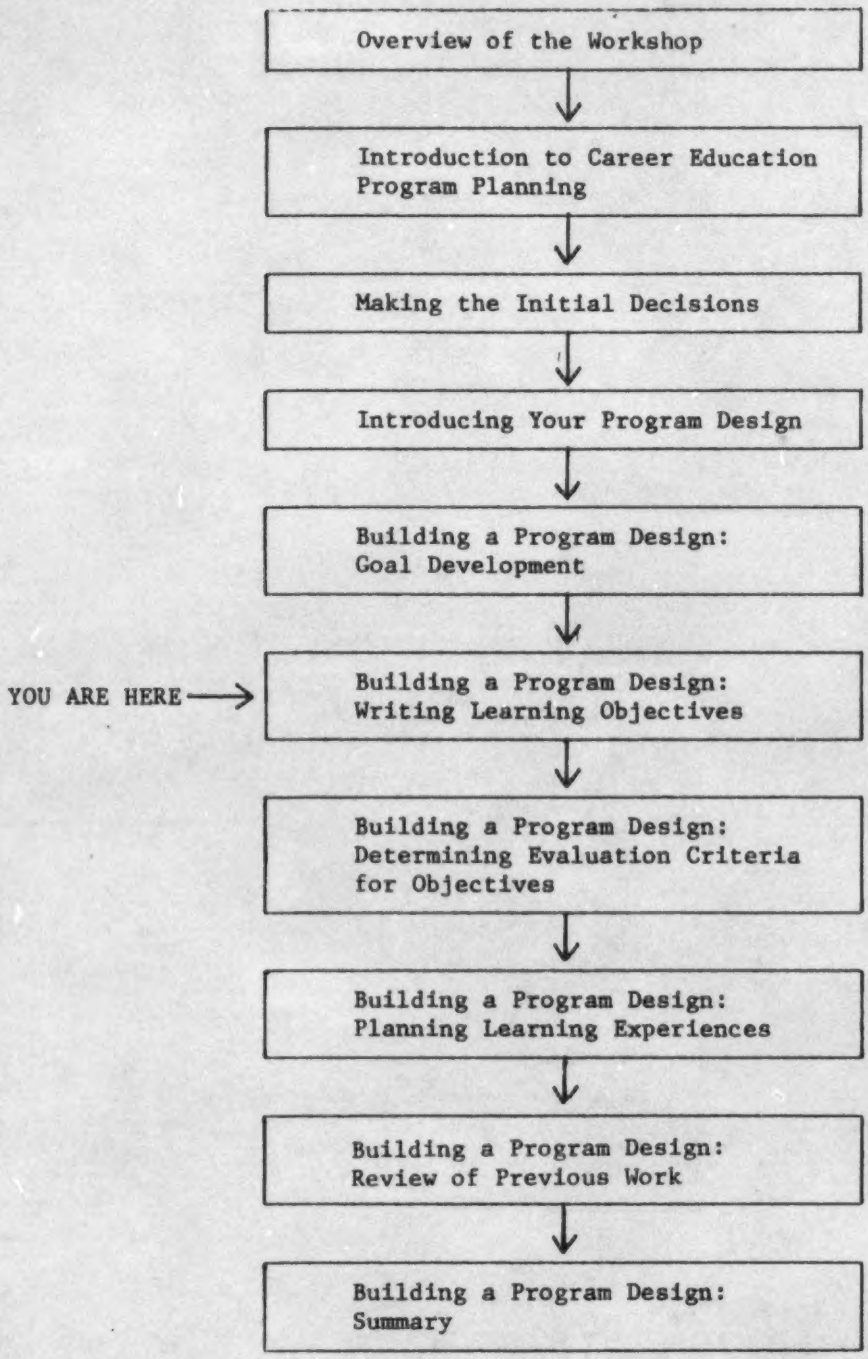
*Adapted from Brookover, W.B., et al. Measuring and attaining the goals of education. Alexandra, Va.: Association for Supervision and Curriculum Development, 1980.

SEQUENCE OF ACTIVITIES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ACTIVITY

Building a Program Design: Writing Learning Objectives

In this activity, the program design group writes, for one of the goals they have specified, one to three learning objectives. In writing the objective(s), the group reviews the meaning of the term "learning objectives."

If you wish to read on the subject of learning objectives before beginning this activity, you might find the following helpful: readings in Kapfer (1971); Mager (1962); Mager (1972); and articles by Popham and by Sullivan in Popham, et al. (1969).

Estimated time of activity: 60 minutes.

1. *You might begin this activity as follows:*

   During this activity, we will develop learning objectives for one of the goals you have written during the previous activity. Before going any further, through, let's examine some things about a learning objective:

   - It is an actualization of a goal.
   - It is a statement of a specific knowledge or skill.
   - Its accomplishment is evidenced in the learner by the ability to accomplish specific tasks.
   - It is the intended result of one or more specific learning activities.

   Remember that progress toward an educational goal is made by the accomplishment of many learning objectives and by the internalization and integration of associated learnings. A goal is not completely defined by a set of learning objectives. Consequently, when writing objectives for a particular goal, the aim is not to define the goal in terms of objectives, but rather to specify outcomes which, it is agreed, represent desired evidence that progress toward the goal is being made.

2. *Have the program design group select one goal they have written into the previous activity. This goal should be one that appears to the group to be most desirable as a program goal. The group should enter the number of this goal in the appropriate places in VI and VII of the "Goal Area - Program Element Worksheet." Continue:*

Now that you have decided on a goal, write down on scrap paper some pieces of acceptable evidence that an individual is making progress toward the goal. Here are some suggestions to help you (*from Mager, 1972, pp. 42-45*):

(a) Answer the question, Given a room full of people, on what basis would you separate them into two groups, those who had achieved the goal and those who had not?

(b) Imagine someone else is charged with separating people on the basis of the goal. What instructions would you give this person?

(c) Think of someone who has achieved the goal and write down why you think so.

Now, try to write down some statements about a person that would cause you to agree that progress toward the goal had been made.

3. *After sufficient time has elapsed, suggest that group members share their lists with one another. Then, begin the clarifying process:*

You can see that there are duplications in our lists, statements that are unclear. and statements which now seem worth eliminating. Let us combine our lists, eliminating:

- duplications
- unclear statements
- those things that, on second thought, we might just as well forget.

Effect this consolidation using overhead projector, chalkboard, or newsprint.

4. *After arriving at the consolidated list, examine it for the presence of observable evidence. If it exists in the list, continue with No. 6, below. Otherwise, continue with No. 5, which follows.*

5. Notice that none of the items are statements about a person's observable characteristics or performance. Let us, therefore, select from our list the one statement that appears most desirable as a goal for our career education program and write down, for that item, pieces of observable evidence that a person has the characteristic mentioned. Observable evidence does not have to be constantly visible; the evidence can be elicited by a question or a request and still be observable. For example, that a student is able to name the last

five Presidents of the United States is not a visible trait, but the characteristic can be elicited by asking a question. Likewise, the ability to play a simple tune on a musical instrument can be demonstrated observably upon request. Let us now select and analyze the statement we wish to work on.

Attempt to guide the group toward an item that will lend itself to analysis in observable terms, and allow the group to continue with modifications until a suitable list is written. Then, proceed to No. 6.

6. Notice that we have some items on the list which represent observable characteristics of a person. Remember, observable evidence does not have to be constantly visible; the evidence can be elicited by a question or a request and still be observable. Let us select (one to three) of these observable characteristics for further work. Each characteristic can be defined as a learning outcome of the career education program.

   Select one to three characteristics which appear most desirable to the group as program learning outcomes. Proceed with No. 7, repeating the process for each characteristic selected.

7. *Continue:*

   Our next step in the development of objectives is to examine the statement of an observable student characteristic and rewrite it in terms of an observable performance, describing the quality or quantity of the performance if that seems appropriate. Some helpful "stems" for writing these performance statements are:

   - Students are considered to have progressed toward (the goal under consideration) when they can..."
   - The student who (has satisfactorily progressed toward the goal) is able to..."
   - The following skills are required of students who are considered to have (satisfactorily progressed toward the goal):

   For example, if the educational goal is stated as "Students will understand the basic principles of personal financial management," observable characteristics might be:

   - can write a check
   - makes a weekly personal budget
   - is able to reconcile a checkbook with a bank statement.

From these characteristics might be written these performance statements:

The performance statements are given on the activity handout, "Some Objectives." Distribute the handout to the group, reviewing with them the form of the performance statements.

8. *When the one to three characteristics selected at the end of No. 6 have been defined in terms of observable performance, explain to the group that these are learning outcomes associated with the particular goal they are considering. As learning outcomes, they are correctly labelled objectives and should be entered in the appropriate places in VI of the "Goal Area - Program Element Worksheet."*

9. *Having developed one to three learning objectives, explain that before any decisions can be made about learning activities that would lead to student attainment of the objectives, it is necessary to place accomplishment of the objective at a particular grade level. Ask the group to consider each objective and assign it to a particular grade level within the target population of the program. When this is done, the group enters the decisions in the spaces marked "grade" in VI of the "Goal Area - Program Element Worksheet."*

10. *Explain that the next activity will focus on the development of evaluation criteria for one of the objectives that the group has written.*

ACTIVITY HANDOUT

Some Objectives

"A student can be considered to have progressed satisfactorily toward understanding the basic principles of personal financial management if the student can write a personal check which is sufficiently correct as to be negotiable at a bank."

"The student who has progressed satisfactorily toward the goal of understanding the basic principles of personal financial management can produce a realistic personal weekly budget, given the required information."

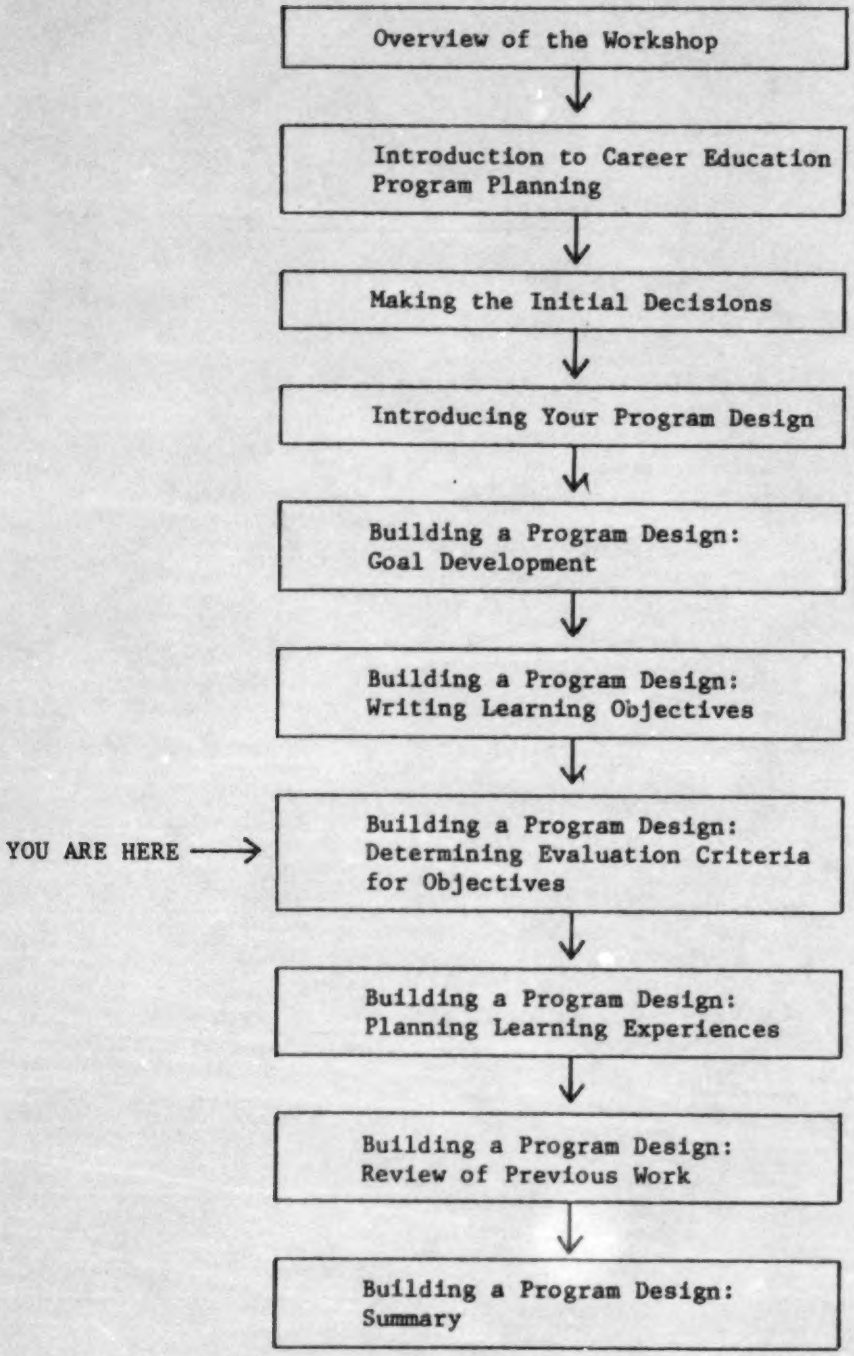
"The following skills are required of students who are considered to have progressed satisfactorily toward an understanding of the basic principles of personal financial management:

(a) be able to write a personal check which is sufficiently correct as to be negotiable at a bank

(b) be able to produce a realistic personal weekly budget, given the required information

(c) given a bank statement and a checkbook record, be able to reconcile the two."

SEQUENCE OF ACTIVITIES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ACTIVITY

Building a Program Design: Determining Evaluation Criteria for Objectives

In this activity, members of the program design group determine at least one criterion for attaining one learning objective of their own authorship. This is a discussion activity in which the design group engages in cooperative effort to determine the evaluation criteria.

Estimated time of activity: 30 minutes.

1. *You might begin the activity by explaining:*

   Our previous work has produced learning objectives -- intended outcomes of learning activities described in terms of expected student behaviors or ability after instruction. Objectives are outcomes--things a student does or can do after instruction. There is, however, a question which remains unanswered: "Does" and "can do" are words which do not imply quality. How well must a student's performance be in order that it be considered as acceptable, i.e., having met the learning objectives?

2. The "how well" question is answered by what we shall term the evaluation criteria.

   Mager (1972) calls these the "criteria of acceptable performance."

   Some possibilities for answering the "how well" question are *(again, from Mager, 1972)*:

   - by indicating a time limit
   - by specifying some minimum number of correct responses
   - by specifying some minimum percentage or proportion of correct responses
   - by describing the important characteristics of performance accuracy.

3. *Continue:*

   You have your objectives; you have located them at specific grade levels. Now we will establish one or more evaluation criteria for one of the objectives you have written.

Have the group select one of the objectives they developed and identify it in section VII of the "Goal Area - Program Element Worksheet." Then, in discussion, decide on at least one evaluation criterion for the objective. The criterion may be as described above; it may also include descriptions or examples of test items deemed appropriate for evaluating attainment of the objective. When criteria are developed, team members should add same to section X of their worksheets. You might wish to refer to the handout entitled "Some Objectives," distributed during the previous activity, for examples.

4. *At this point, suggest that the group examine both the evaluation criteria and the associated objective from two perspectives:*

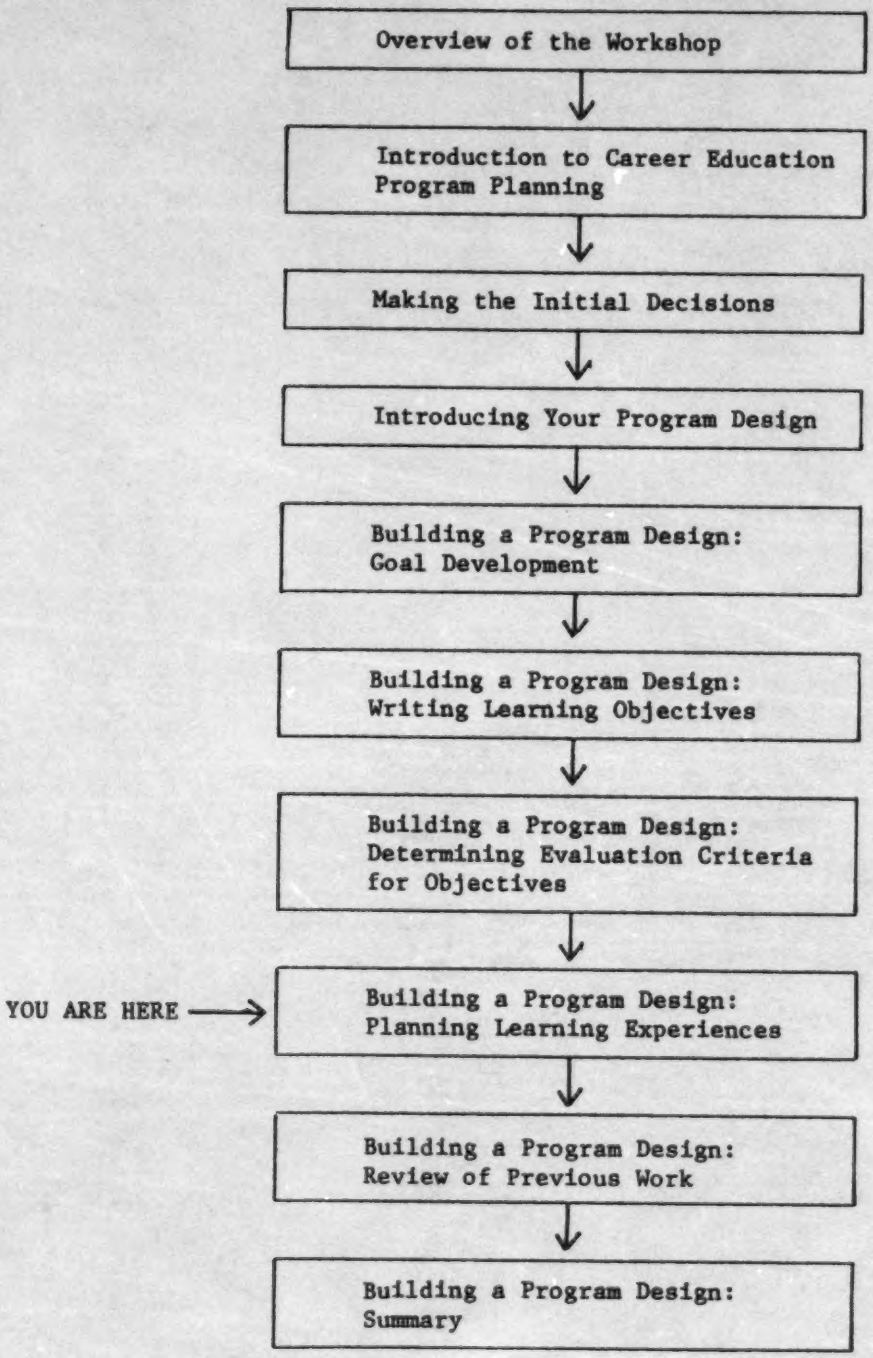
   - *Is there congruence of objective and evaluation criterion? Is the criterion representative of the objective?*

   - *Is the criterion feasible or practical? Can a teacher for example, conveniently measure attainment of an objective in terms of the criterion?*

   If there are problems in either of the two areas above, reconsideration should be given to the criterion, the objective, or both, with a view toward making whatever changes are necessary.

5. *Explain that the next task will involve the planning of learning activities.*

SEQUENCE OF ACTIVITIES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ACTIVITY

Building a Program Design: Planning Learning Experiences

In this activity, the members of the program design group will plan a learning activity which is consistent with both a stated learning objective and predetermined evaluation criteria. Experience in schools has shown that achieving this three-way consistency (objective-activity-evaluation criterion) is very difficult.

Estimated time of activity: 45 minutes.

1. *Explain to the group that the task at hand is to plan a learning activity that assists students in attaining an objective to a degree of proficiency specified in the evaluation criterion. Explain that the objective that will be used is the same as was used in developing the evaluation criteria.*

2. *Tell the group that their first job will be to assign the objective within the program element. If, for example, the objective is within the course instruction program element, the objective might be assigned to a particular course or be assigned to a particular department. In making assignments, keep in mind the requirement of consistency with grade level. After locating the objectives within the program element, note the location in section VIII of the "Goal Area - Program Element Worksheet."*

3. *Once this has been done, explain to the group that, given*

   - *location within the element,*
   - *grade level,*
   - *objective, and*
   - *evaluation criterion,*

   they are now in a position to design a learning activity.

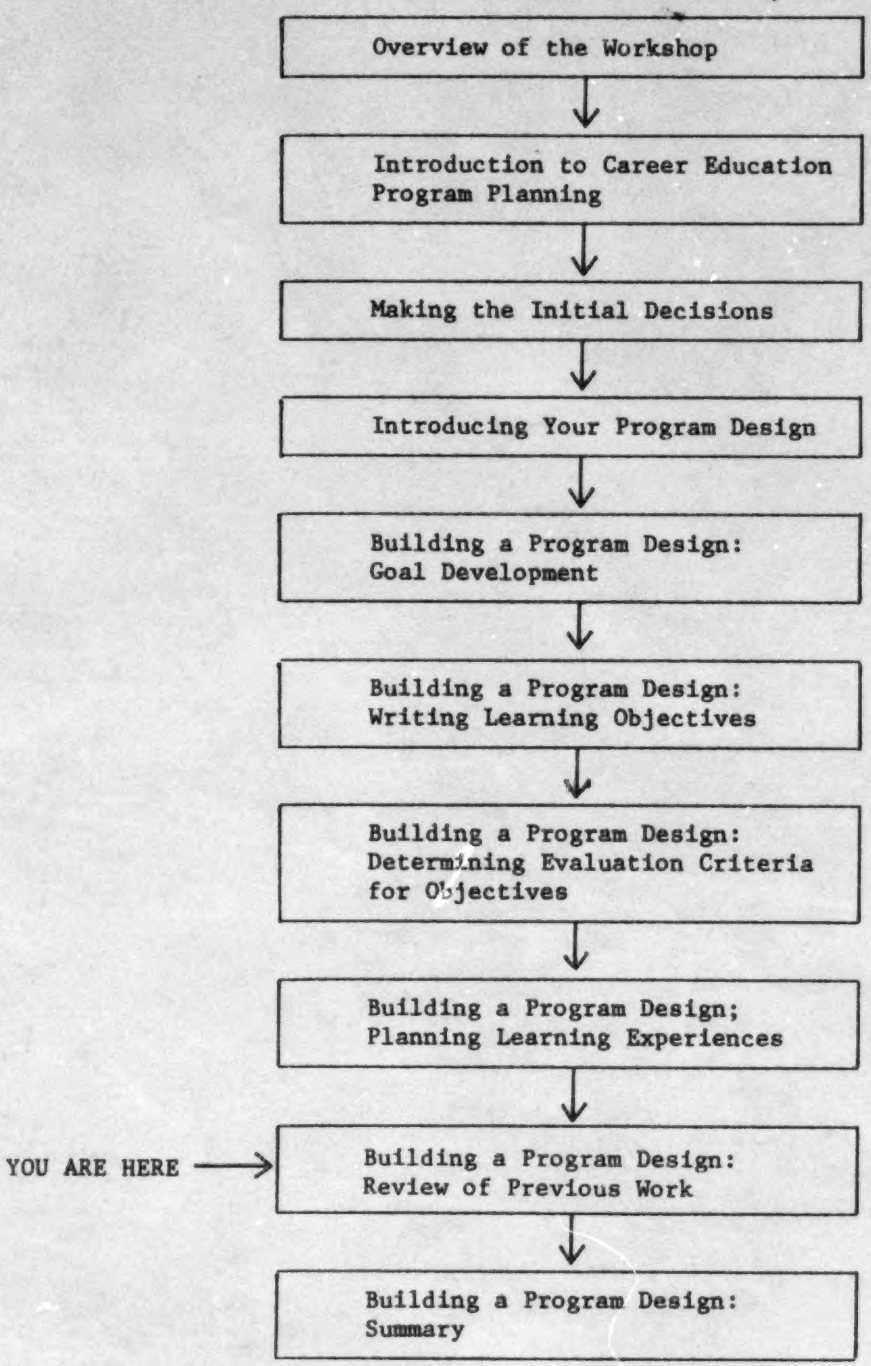
4. *Engage the group in cooperative development of a learning activity. Suggest alternative contexts (at workplaces, on trips, as home-based assignments, etc.) and strategies (direct teaching, infusion, etc.).*

At this point, you may wish to introduce the group to the published collections of career education activities. You might do this by presenting one or two references for group inspection, by discussing the handout, "Some Sources of Career Education Activities," distributed earlier in the workshop, or both.

As the group plans its sample learning activity, exercise strong guidance in keeping the match of learning activity to objective and evaluation criterion. When the activity is decided upon, have the group write a brief summary of the activity and enter the summary in section IX of the "Goal Area - Program Element Worksheet."

5. *Explain that the next activity will consist of a review of the work done so far and an attempt to put the work in perspective.*

SEQUENCE OF ACTIVITIES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Building a Program Design: Summary

ACTIVITY

Building a Program Design: Review of Previous Work

In this activity, the program design group will change focus from the microscopic view taken in the past several activities to a global view. Essentially, this activity asks group members to (1) review the work of the last few activities, (2) draw some conclusions about what their decisions say about their ideas for the particular program element in the goal area discussed, and (3) add to these ideas. Additions will, of course, be useful to future work.

1. *You might begin the discussion as follows:*

   The past several activities have seen us develop goals within a goal area, specify learning objectives for a goal, plan a learning activity to actualize an objective, and determine evaluation criteria as a measure of the objective's attainment. As we worked, our view became more and more narrowed. It is now time to go back to the broader view and examine our own work. Think about the goal area in which we have worked and the program element we have been considering within that goal area. In what context (setting) did we plan for our learning activity to occur? Write the context (setting) in section IV of your "Goal Area - Program Element Worksheet," clarifying it if necessary.

   Example: "Home" as a context would need clarification, e.g., as homework, as a home project, as use of home as a personal or institutional resource.

   In what other contexts (settings) do you envision the program element in question to operate in addressing this goal area? Write them down in section IV also.

2. *Continue:*

   When we spoke earlier of educational goals, we referred to goals for student achievement. Sometimes these goals are called "outcome goals" to distinguish them from so-called "process goals." "Process goals explain what the school should do to maximize the educational experiences for students." *(Kaplan, et al., 1974, p. 7).* In other words, outcome goals deal with what the student

should be able to do; process goals deal with what the school should do to help the student progress toward the outcome goals. Typical process goals are shown on the handout, "Examples of Process Goals."

3. *Distribute the handout and discuss how the goals presented are action goals for the school, not the student. Continue:*

   Let us now consider what we think is required of the school to permit student accomplishment of the learning activity we have written. If any process goals are implied in the activity, list them in section III of your "Goal Area - Program Element Worksheet." Consider, too, if there are any <u>other</u> process goals required of the program element in addressing the goal area. If our decision is "yes" (and the decision should not be made lightly), add those process goals to section III.

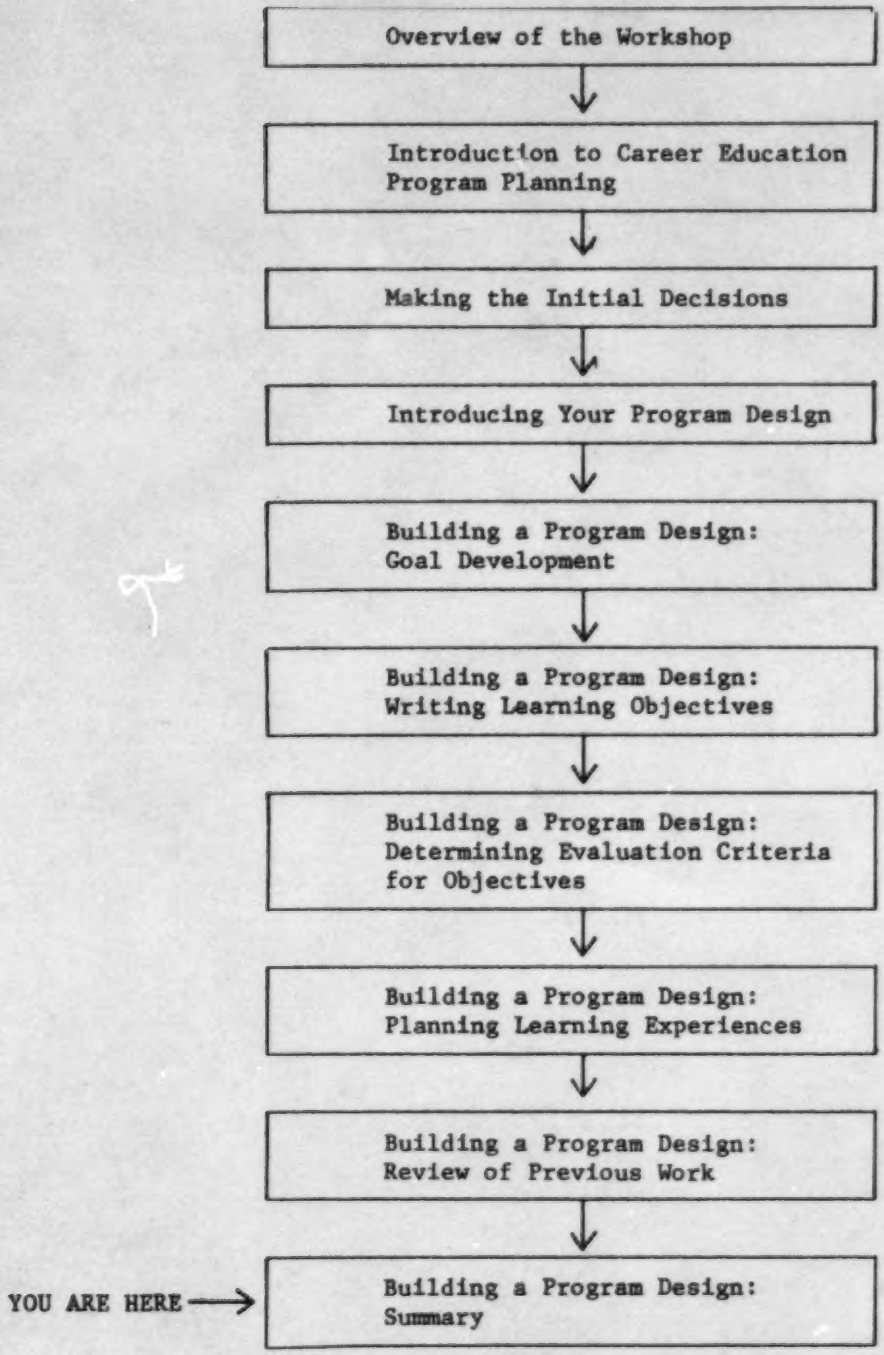
4. *Explain that the next activity will be a summary with suggestions as to where to go from here.*

ACTIVITY HANDOUT

Examples of Process Goals

- Students will have access to a Career Resource Center which will contain (specifications follow).
- Each student will be given the opportunity to visit at least three workplaces during each year.
- Each student will be scheduled for at least one individual session with a school counselor each semester.

SEQUENCE OF ACTIVITIES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Building a Program Design: Summary

ACTIVITY

Building a Program Design: Summary

The purposes of this activity are to (1) recap what has been done in the workshop, (2) suggest a format for tabulation of the work for easy reference, and (3) explain where subsequent effort should be directed.

Essentially, from here the program design process is cyclical: adding objectives to goals, goals to goal areas within program elements, goal areas to program elements. This cyclical planning process can and perhaps should go on indefinitely. What should be encouraged are realistic phases of planning and implementation. After a reasonable number of objectives are established, planning should progress to the next step, that of drawing up an implementation plan to effect the established design. Original planning efforts should result, therefore, in an overview of the program (given in the introduction), an element-outcome grid, and specification of the design to a reasonable number of objectives.

Program design efforts continue for a "second phase," but care must be taken not to allow the first implementation phase to be (a) so large as to be unmanageable, or (b) viewed as final. Planning and implementation of school improvement should be seen as ongoing processes.

Estimated time of activity: 30 minutes.

1. *You might begin the discussion as follows:*

   What remains for us now is to summarize what has been done in tabular form for easy reference, and to discuss where to go from here. We have taken only one element-outcome category from the element-outcome grid. From this we developed up to three goals. From one goal, we wrote up to three objectives. For one objective, we planned both a sample learning activity and evaluation criteria. This is, as you can see, a process that can be repeated over and over again. The program structure then looks like the handout, "Outcome-Oriented View of Program Structure."

   Distribute the handout and review the program structure, making the following points:

   - The nature and number of program elements can vary.
   - The nature and number of goal areas can vary within program elements.

- The number of goals varies from area to area.
- The number of objectives varies from goal to goal.

2. *Continue:*

   Your program can be as extensive or as limited as you want it to be. Because it can be extensive, it might be well to make a table of what we have done now, for easy future reference. One way to tabulate program design work is shown on the handout, "Structure for One Goal Area Within One Program Element."

3. *Distribute and review the handout now. If you wish to have the group tabulate current work, you can use the activity handout for this purpose.*

4. *Continue:*

   The written introduction which you have produced, together with your element-outcome grid and whatever further design work you consider feasible constitutes the first design phase.

   The next step after a design phase in effecting school improvement is implementation, and the first task in implementing a program design is planning that implementation. The question that arises now is: How much of a program do we design before planning for the implementation of our design?

   - First, do not design so much that what is implemented looks like the complete program.
   - Second, do not design so much that implementation is an overwhelming or extremely difficult task. If a program is implemented in reasonable, "painless" stages, there will be more chance of maintaining the program over time.

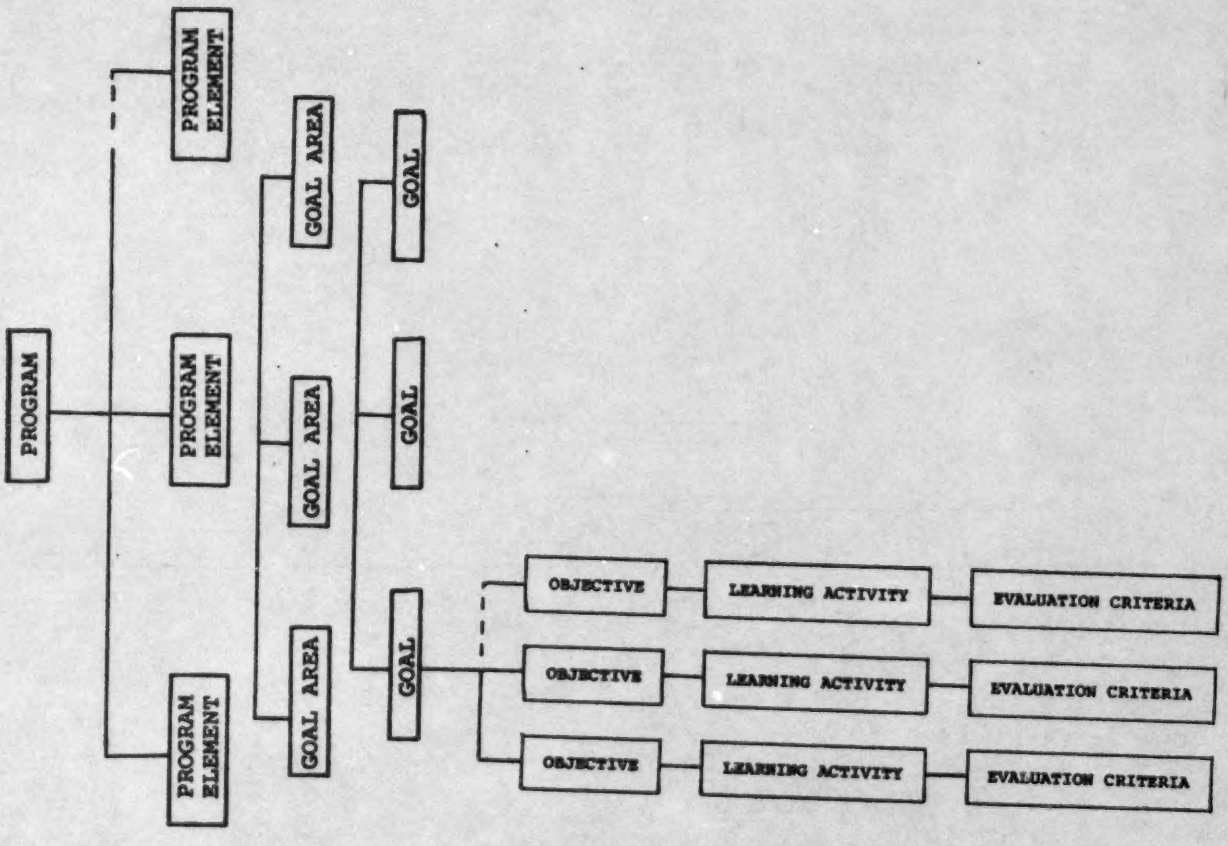
5. *Continue:*

   Now, the program design group is left to expand on the work of this workshop to a point where what is designed can reasonably be implemented.

   Once this is done, the introduction and element-outcome grid are added to produce a first-phase design document.

ACTIVITY HANDOUT

Outcome-Oriented View of Program Structure



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ACTIVITY HANDOUT

Structure for One Goal Area Within One Program Element

GOAL AREA: _____

PROGRAM ELEMENT: _____

PROGRAM ELEMENT PROCESS GOALS:

1. _____
2. _____
3. _____

CONTEXTS:

1. _____
2. _____

GOAL	OBJECTIVES	LOCATION	SUGGESTED LEARNING ACTIVITIES	EVALUATION CRITERIA
(repeat this table for each goal)				

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